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CalESCO

CALIFORNIA EARTH SCIENCE CORPORATION

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June 5, 1975

Contract NAS 2-7698  
MONTHLY PROGRESS REPORT NO. 24  
May 1975

"Made available under NASA sponsorship  
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semination of Earth Resources Survey  
Program information and for any use made therefrom"

Fault Tectonics and Earthquake Hazards in the Peninsular Ranges,  
Southern California, EREP Investigation 463

NASA-Lyndon B. Johnson Space Center  
Technical Support Procurement Branch  
Houston, Texas 77058

Attention: Mrs. Ruth Elder, Mail Stop BB631 (B9)

Dear Mrs. Elder:

California Earth Science Corporation (CalESCO) is pleased to submit its 24th Monthly Progress Report on the application of Skylab imagery to analysis of fault tectonics and earthquake hazards in the Peninsular Ranges, Southern California under NASA Contract No. NAS 2-7698.

Summary Outlook

The principal plans for the immediate future are to prepare the final reports on our analysis of Skylab data, and to prepare and analyze S192 images. Field studies of the area covered by the S192 images will be accomplished when the technical reports in preparation are completed.

Significant Progress

1. A paper entitled "Active and Inactive Faults in Southern California Viewed from Skylab" was prepared and submitted for publication in the Proceedings Volume of the NASA Earth Resources Survey Symposium, Houston, Texas. This paper constitutes a summary of the principal research accomplished on the subject contract.
2. Thin sections of rock exposed along the San Diego River linear were prepared and determined to be fault breccia.
3. Single band and ratio images of the western Mojave Desert were prepared from the S192 digital tapes. Subtle differences in color of soil and rock are apparently enhanced on the ratio images.

(E75-10318) FAULT TECTONICS AND EARTHQUAKE  
HAZARDS IN THE PENINSULAR RANGES, SOUTHERN  
CALIFORNIA Monthly Progress Report, May  
1975 (California Earth Science Corp., Santa  
Monica.) 2 p

N75-26462

Unclas  
00218

CSCL 08E G3/43

4. Several field days were spent in the Peninsular Ranges completing our study of the San Diego River and Otay Mountain faults. In addition, linears between Japaul Valley and Barrett Lake were investigated. Two north-northeast trending linears (Horsethief Canyon and Pine Valley Creek) and an east-west linear (Pine Creek) were concluded to have resulted from erosion along well-developed foliation in crystalline basement rocks.

Expected Accomplishments, Current Month

1. A paper entitled "Active and Inactive Faults in Southern California Viewed from Skylab" will be presented at the NASA Earth Resources Symposium, Houston, Texas, June 8-13, 1975.
2. A paper entitled "Digital Enhancement of ERTS and Skylab S-192 Multispectral Scanner Images of the Mojave Desert, California" will be presented at the American Geophysical Union Meeting in Washington, D.C., June 19, 1975.
3. Work will be continued on the following technical reports:
  - Investigation of Lineaments on Skylab and ERTS Images of Peninsular Ranges, Southwestern California
  - Skylab Imagery of the Salton Trough Area, Southern California
  - Analysis of the Enhancement Characteristics of Pseudocolor Transformations

Travel Summary and Plans

Trips to Houston, Texas and Washington, D.C. to present the above referenced papers are planned.

Very truly yours,

CALIFORNIA EARTH SCIENCE CORP.

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